GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 1618
TO BE ANSWERED ON WEDNESDAY, 30TH JULY, 2025

AUTOMATED WEATHER STATIONS

1618. THIRU DAYANIDHI MARAN:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Government has plans to expand the installation of Automated Weather Stations (AWS) and doppler radars in Tamil Nadu, particularly in flood-prone coastal districts such as Chennai, Cuddalore and Nagapattinam, if so, the timeline and details of such installations, location-wise;
(b) whether there is a dedicated strategy to enhance Nowcast and short-range weather forecasting accuracy for vulnerable geographies in Tamil Nadu including the Western Ghats and delta regions and if so, the details thereof;
(c) whether the Government is planning to collaborate with the Tamil Nadu State Disaster Management Authority (TNSDMA) and local panchayats to integrate real-time weather alerts and vulnerability mapping to improve flood preparedness and minimise habitat-level damage and if so, the details thereof; and
(d) whether the Government proposes to make Tamil-language versions of the IMD mobile app and farmer-specific forecast platforms available to improve accessibility for Tamil Nadu's rural population and agricultural workers and if so, the details thereof?

ANSWER
THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) Yes. The Government has been continuously updating and expanding the meteorological observation network consisting of Automated Weather Stations (AWS) and Doppler Weather Radars (DWRs) in Tamil Nadu, including its flood-prone coastal districts such as Chennai, Cuddalore, and Nagapattinam. Currently, there are 65 AWSs and 80 Automatic Rain Gauge (ARG) stations in the State of Tamil Nadu covering all 38 districts. In the flood-prone coastal districts Chennai, Cuddalore, and Nagapattinam, there are 3, 3, and 2 AWSs, respectively, and 5, 2, and 1 ARGs, respectively. Under the Mission Mausam and Panchayat level Mausam Seva, the observation network in the entire country will be augmented further in the coming years, as per the requirement.

(b) Yes. For Tamil Nadu, there is a dedicated strategy to provide effective Nowcast and short-range weather forecasting with reasonable accuracy for all vulnerable geographies in Tamil Nadu. Under this strategy, presently IMD is using various high-resolution wind, clouds, and rain-related products from satellites, and 6 DWRs (2 at Chennai, one each at Sriharikota, Karaikal, Kochi & Thiruvananthapuram). Surface weather parameters from a total of 65 AWSs & 80 ARGs are also used. Besides these multi-observational-based Nowcast systems, various meso-scale models (HRRR and E-WRF), which assimilate RADAR data, are also regularly run at a resolution of 2km for providing round-the-clock

Nowcast and short-range weather warning guidance. DWR Kochi and Thiruvananthapuram provide inputs over the Western Ghat districts, and DWR Karaikal for the delta districts. DWRs under Mission Mausam also provide crucial inputs in better monitoring of heavy rainfall events over the western ghat areas. The newly launched Bharat Forecast System (BFS) has a very high spatial resolution of 6 km, which will help in generating forecasts at the panchayat/cluster of panchayats level for the public, farmers, disaster managers, and other stakeholders.

(c) Yes. The India Meteorological Department has been interacting and collaborating with the Tamil Nadu State Disaster Management Authority (TNSDMA) to reduce meteorological disaster risk. Regular review and preparedness meetings are conducted for continuous improvement of the early warning systems, e.g., Impact based forecast, Urban Met services, etc., for vulnerable severe weather like monsoonal heavy rainfall events, tropical cyclones, etc., impacting the States. Also, in real time, IMD has been regularly sharing all bulletins and warnings against all types of severe weather on a real-time basis, e.g., district level, colour-coded, impact-based warnings for severe weather due to tropical cyclones & heavy rainfall. Sector-specific warnings are also issued for aviation, agriculture, fishing & marine communities & ports. Regarding flood warning, the Central Water Commission (CWC) is mandated to issue short-range flood forecasts with a lead time of up to 24 hours to concerned State Governments at identified locations. Timely flood forecasts are being issued when a certain threshold limit is reached.

(d) Yes. The Government has been working to make Tamil-language versions of the IMD mobile app and farmer-specific forecast platforms available to improve accessibility for Tamil Nadu's rural population and agricultural workers. There are ongoing initiatives to improve the accessibility of weather-based services for Tamil Nadu's rural population and agricultural workers. A mobile application named "Uzhavar", developed by the Department of Agriculture, Government of Tamil Nadu, and managed by the Tamil Nadu Civil Supplies Corporation, currently has over 18 lakh registered farmers. District-level Agromet Advisories issued jointly by IMD, ICAR & State Agricultural Department and Agricultural University through the Agromet Field Units (AMFUs) are made available in Tamil language for all districts through the 'Uzhavar' App. In addition, block-level weather forecasts for the next six days are also provided in Tamil for all blocks across the State. Furthermore, the Department of Agriculture, Government of Tamil Nadu, has established approximately 1,456 WhatsApp groups at district, block, and village levels, comprising more than 1 lakh farmers. The information flow is systematically structured-First shared with district-level groups, then disseminated to block-level groups, and finally forwarded to village-level groups. This three-tiered dissemination system ensures that real-time weather updates, warnings, and agromet advisories reach end users efficiently. Thus, multiple platforms, including the Uzhavar App and WhatsApp networks, are being effectively utilized for farmer-centric weather communication in the Tamil language.

****